

Remarks

Claim 21 has been objected to under 35 CFR 1.75(c) for asserted failure to further limit the method of claim 20. The Examiner noted that claim 21 includes the same limitations that are present in claim 20. Claim 21 has been cancelled.

Claims 20-23 have been rejected under 35 U.S.C. §103(a) for double patenting over claims 1, 2, 15 and 18 of Shim '972 in view of U.S. Patent No. 3,767,586 to Rutkiewicz and U. S. Patent No. 4,071,463 to Steinhauer. This double patenting rejection should be overcome by the attached Terminal Disclaimer.

The Examiner has rejected claims 20-23 for obviousness over the Shim patent in view of U.S. Patent No. 5,942,126 to Dallmier et al. in view of the Steinhauer patent; and obviousness over the Shim patent in view of the Rutkiewicz patent and the Steinhauer patent.

The Examiner's reasoning for these prior art rejections is very similar to the previous position held by the Examiner based on Shim '972 and Trigiante. In particular, again the Examiner acknowledges that the Shim '972 patent fails to disclose that the stabilized alkaline or alkaline earth metal hydrochlorite has a pH of at least 11. The Examiner relies upon the secondary references for providing motivation to control the pH to about 11. As was previously argued, the Shim '972 patent already teaches residual halogen controlled at 0.1 to 10 ppm for up to seven days and, thus, does not provide any motivation or need for pH control since it already teaches that residual halogen is not a problem. The Shim '972 patent does not provide any suggestion that pH control is required in a process of preparing a biocide. Thus, the secondary references which disclose pH control of hypochlorite solutions are not properly combined with the teachings of the Shim '972 patent.

The secondary references, Rutkiewicz '586, Steinhauer '463 and Dallmier '126 disclose methods for manufacturing stabilized hypochlorite. Further, these patents do not disclose the use of a bromide ion source. These patents suggest that the formulation comprising sodium hypochlorite is maintained at a high pH, preferably from about 11.0 to 13.0 to maintain hypochlorite stability and prevent chlorine gas from producing in a lower pH.

Shim '972 does not suggest controlling the pH in a process of preparing a biocide.

The reasoning in the present application for controlling the pH is totally different from the Rutkiewicz '586, Steinhauer '463 and Dallmier '126 patents. Specifically, the present application suggests controlling the pH over 11 to inhibit the reaction between the stabilized hypochlorite and water-soluble bromide ion. At a pH over 11, the stabilized hypochlorite does not react with the bromide ion and they are maintained as an unreacted mixture.

In use, when the mixture comprising the stabilized hypochlorite and bromide ion is delivered into a water system having a low pH (typically lower than 9), the stabilized hypochlorite, serving as a reservoir of chlorine, releases available chlorine and reacts with the bromide ion to produce HOBr. This is supported by the detailed description of the present invention contained in the instant application.

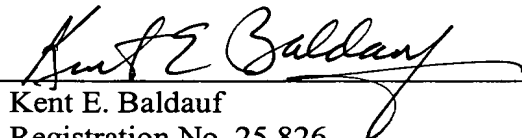
In the absence of some motivation to combine the teachings of these references, a *prima facie* case of obviousness has not been established. Accordingly, claims 20, 22 and 23 define over the prior art of record and are in condition for allowance.

Reconsideration of claims 20, 22 and 23 and allowance of claims 20, 22 and 23 are respectfully requested.

Respectfully submitted,

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